

REMARKS/ARGUMENTS

Claims 9-17 are active.

Applicants note that numbers in braces following refer to page and line of the specification of the present application.

Applicants continue to thank Examiner Niland for the indication that Claims 9-17 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, first paragraph.

Applicants further wish to thank Examiner Niland for the useful and courteous discussion of this application with Applicants' U.S. representative on November 12, 2008. At that time, Applicants' U.S. representative discussed the chemistry and technology involved in this application and reviewed the meaning and significance of the terminology "40 % of the monomers" in relation to the claimed invention. The following reiterates and expands upon that discussion..

The claimed invention provides process for preparing a hybrid dispersion comprising polyadducts and free-radical addition polymers, by first emulsifying a monomer mixture comprising the monomers of the polyadduct and the monomers of the polymer with water, and then conducting a polyaddition to prepare the polyadducts and a free-radical addition polymerization to prepare the polymers. According to the claimed process, the monomer mixture is emulsified in water before 40% of the monomers of the polyadduct have reacted to form the polyadduct.

Applicants have described that conventional methods for preparing hybrid dispersions of polyadducts and free-radical addition polymers involve multistep and cumbersome processes which yield products having undesirable properties {page 1, lines 20-34}

Applicants have discovered that hybrid dispersions having improved properties are obtained by the claimed process where the monomer components of the polyadduct and the free radical addition polymer are first emulsified, then polymerization and polyaddition performed {page 2, lines 8-19}. Applicants have described that within the claimed inventive process emulsifying the monomer components prior to significant polyadduct formation is an important limitation. The specification {page 2, lines 21-38} states:

The hybrid dispersions of the invention comprising polyadducts and free-radical addition polymers are obtainable by first emulsifying the constituent monomers of the said polyadducts and said polymers in water, i.e., introducing the respective monomers into an aqueous dispersion by means of customary emulsifiers.

This is followed by the actual polyaddition for preparing the polyadducts and the actual free-radical addition polymerization for preparing the polymers. **Another feature of the hybrid dispersions of the invention is that the particular monomers required are emulsified in water before 40% of the monomers of which the polyadducts are composed have reacted to form such polyadducts. Preferably, the monomers required in each case to prepare the polyadducts and the polymers should already be emulsified in water before 30%, advisably 20%, more advisably 10%, in particular 5%, and with particular preference 1% of the monomers of which the polyadducts are composed have reacted to form such polyadducts. (Bold added)**

Clearly, according to the inventive process, the monomers are emulsified together to form an intimate mixture prior to polyadduct formation. This distinguishes the claimed process from conventional methods where the polyadduct is first formed {page 1, lines 20-33} and then the free radical polymerization monomer added and polymerized.

The limitation that the monomers are emulsified prior to polyaddition is described in Claim 9, as “wherein the monomer mixture is emulsified in water before 40% of the monomers of the polyadduct have reacted to form the polyadduct.”

The rejection of Claims 9-17, under 35 U.S.C. § 112, second paragraph, is respectfully traversed.

The subject of units associated with the % of monomers of the polyadduct has been questioned by the Office. The application as originally filed stated “40% of the monomers” and Applicants respectfully continue to submit that the original wording is correct. Applicants have previously described that the 40% as indicated in Claim 9 is a ratio value and therefore is correctly stated as a number value with no units (Amendment and Request for Reconsideration, filed July 10, 2008).

As Applicants previously argued the IR method for analysis of isocyanate group content is based on a ratio of an absorbance at some time along the reaction pathway compared to the initial absorbance:

$$A_t/A_0 = a \cdot b \cdot c_t / a \cdot b \cdot c_0.$$

In this analysis the values of a and b in the numerator and denominator are the same and cancel one another, simplifying the equation to

$$A_t/A_0 = c_t / c_0.$$

Since both c_t and c_0 are in units of moles/liter, the units cancel and the measurement term is expressed as a numerical percentage, consistent with the present recitation of the claimed invention and the specification and claims as originally filed.

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986).

Applicants respectfully submit that one of ordinary skill in the art would recognize the meaning of the claim, especially in view of the description provided on page 2 of the specification above.

Moreover, one of ordinary skill in the art would recognize that, given a specific composition of polyadduct monomers where chemical formula and structure are defined, % of monomers, mole % and weight % are related based on molecular weight and can be calculated, one from the other via mathematical operations known to one of ordinary skill in the art.

Applicants respectfully submit that a rejection under 35 U.S.C. § 112, second paragraph, is only appropriate if the language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (*Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470, 28 USPQ2d 1190,1195 (Fed. Cir. 1993)).

Applicants respectfully submit that the description of the claim as supported by the specification is such that interpretation by one of ordinary skill in the art leads to the understanding that the monomers are emulsified together before polyadduct formation occurs to the extent that 40 % of the polyadduct monomers are reacted.

Applicants note the Office's concern relative to a prosecution record made unclear by previous suggestion that 40% by weight was intended. However, as noted above the various descriptive terms are related by mathematical operation. Applicants respectfully contend that the specification and claims as originally filed do describe the invention such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim and understand how to avoid infringement. Therefore, Applicants respectfully submit that rejection under 35 U.S.C. § 112, second paragraph, is not appropriate.

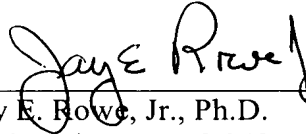
In view of the above, Applicants respectfully request withdrawal of the rejection of Claims 9-17 under 35 U.S.C. 112, first paragraph.

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Applicants respectfully submit that the above-identified application is now in
condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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A handwritten signature in black ink, reading "Jay E. Rowe, Jr.", is written over a horizontal line.

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